

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.



Substitute for form 1449/PTO

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1

of 14

## Complete if Known

Application Number	10/777,773
Filing Date	February 12, 2004
First Named Inventor	Jones, et al.
Art Unit	2631
Examiner Name	Unknown

Attorney Docket Number 1033-MS1003

## U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
TN	AA	US- 6,477,238 B1	11-05-2002	Schneider, et al.	
TN	BB	US- 6,498,791 B2	12-24-2002	Pickett, et al.	
TN	CC	US- 6,532,277 B2	03-11-2003	Ulanskas, et al.	
TN	DD	US- 6,507,606 B2	01-14-2003	Shenoi, et al.	
TN	EE	US- 6,538,451 B1	03-25-2003	Galli, et al.	
TN	FF	US- 6,724,859 B1	04-20-2004	Galli	
TN	GG	US- 6,731,678 B1	05-04-2004	White, et al.	
TN	HH	US- 6,697,768 B2	02-24-2004	Jones, et al.	
TN	II	US- 6,549,568 B1	04-15-2003	Bingel	
TN	JJ	US- 6,625,255 B1	09-23-2003	Green, et al.	
TN	KK	US- 6,643,266 B1	11-04-2003	Pugaczewski	
TN	LL	US- 6,668,041 B2	12-23-2003	Kamali, et al.	
TN	MM	US- 6,782,082 B2	08-24-2004	Rahamim	
TN	NN	US- 6,728,238 B1	04-27-2004	Long, et al.	
TN	OO	US- 6,640,239 B1	10-28-2003	Gidwani	
TN	PP	US- 6,597,689 B1	07-22-2003	Chiu, et al.	
TN	QQ	US- 6,466,088 B1	10-15-2002	Rezvani, et al.	
TN	RR	US- 6,769,000 B1	07-27-2004	Akhtar, et al.	
TN	SS	US- 6,769,024 B1	07-27-2004	Natarajan, et al.	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
TT						
UU						
VV						
WW						
XX						
YY						

Examiner  
Signature

Toan D. Nguyen

Date  
Considered

03/31/06

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2

of 14

## Complete if Known

Application Number	10/777,773
Filing Date	February 12, 2004
First Named Inventor	Jones, et al.
Art Unit	2631
Examiner Name	Unknown

Attorney Docket Number 1033-MS1003

## U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
TN	AB	US- 6,765,864 B1	07-20-2004	Natarajan, et al.	
TN	AC	US- 6,751,662 B1	06-15-2004	Nararajan, et al.	
TN	AD	US- 6,735,601 B1	05-11-2004	Subrahmanyam	
TN	AE	US- 6,771,673 B1	08-03-2004	Baum, et al.	
TN	AF	US- 6,765,918 B1	07-20-2004	Dixon, et al.	
TN	AG	US- 6,763,025 B2	07-13-2004	Leatherbury, et al.	
TN	AH	US- 6,762,992 B1	07-13-2004	Lemieux	
TN	AI	US- 6,775,232 B1	08-10-2004	Ah Sue, et al.	
TN	AJ	US- 6,775,268 B1	08-10-2004	Wang, et al.	
TN	AK	US- 6,778,525 B1	08-17-2004	Baum, et al.	
TN	AL	US- 6,751,315 B1	06-15-2004	Liu, et al.	
TN	AM	US- 6,754,283 B1	06-22-2004	Li	
TN	AN	US- 6,751,218 B1	06-15-2004	Hagirahim, et al.	
TN	AO	US- 6,667,971 B1	12-23-2003	Modarressi, et al.	
TN	AP	US- 6,674,725 B2	01-06-2004	Nabkel, et al.	
TN	AQ	US- 6,674,749 B1	01-06-2004	Mattathil	
TN	AR	US- 6,680,940 B1	01-20-2004	Lewin, et al.	
TN	AS	US- 6,608,835 B2	08-19-2003	Geile, et al.	
TN	AT	US- 6,570,855 B1	05-27-2003	Kung, et al.	

## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
	AU					
	AV					
	AW					
	AX					
	AY					
	AZ					

Examiner Signature

Tran D. Nguyen

Date Considered

03/31/06

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	10/777,773
Sheet	3	Filing Date	February 12, 2004
		First Named Inventor	Jones, et al.
		Art Unit	2631
		Examiner Name	Unknown
		Attorney Docket Number	1033-MS1003

<b>U. S. PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
TN	BA	US- 6,775,273 B1	08-10-2004	Kung, et al.	
TN	BC	US- 6,775,267 B1	08-10-2004	Kung, et al.	
TN	BD	US- 5,751,338	05-12-1998	Ludwig, Jr.	
TN	BE	US- 5,974,139	10-26-1999	McNamara, et al.	
TN	BF	US- 5,987,061	11-16-1999	Chen	
TN	BG	US- 6,044,107	03-28-2000	Gatherer, et al.	
TN	BH	US- 6,055,268	04-25-2000	Timm, et al.	
TN	BI	US- 6,700,927 B1	03-02-2004	Esliger, et al.	
TN	BJ	US- 6,658,052 B2	12-02-2003	Krinsky, et al.	
TN	BK	US- 6,614,781 B1	09-02-2003	Elliott, et al.	
TN	BL	US- 6,467,092 B1	10-15-2002	Geile, et al.	
TN	BM	US- 6,317,495 B1	11-13-2001	Gaikwad, et al.	
TN	BN	US- 6,424,657 B1	07-23-2002	Voit, et al.	
TN	BO	US- 6,081,291	06-27-2000	Ludwig, Jr.	
TN	BP	US- 6,292,559 B1	09-18-2001	Gaikwad, et al.	
TN	BQ	US- 2004/0095921 A1	05-20-2004	Kerpez	
	BR	US-			
	BS	US-			
	BT	US-			

<b>FOREIGN PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear
	BU				
	BV				
	BW				
	BX				
	BY				
	BZ				

Examiner Signature	Tran D. Nguyen	Date Considered	03/31/06
--------------------	----------------	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>
				<b>Application Number</b> 10/777,773
				<b>Filing Date</b> February 12, 2004
				<b>First Named Inventor</b> Jones, et al.
				<b>Art Unit</b> 2631
				<b>Examiner Name</b> Unknown
Sheet	4	of	4	<b>Attorney Docket Number</b> 1033-MS1003

<b>NON PATENT LITERATURE DOCUMENTS</b>			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
TN	CA	INTERNATIONAL TELECOMMUNICATION UNION, "Series G:Transmission Systems and Media, Digital Systems and Networks. Digital Sections and Digital Line System-Access Networks. Asymmetric Digital Subscriber Line (ADSL) Transceivers- 2(ADSL2)," G.992.3, ITU-T, July 2002, pages 1-127.	
	CB		
	CD		
	CE		
	CF		
	CG		
	CH		
	CI		
	CJ		
	CK		

Examiner Signature	Tom D. Nguyen	Date Considered	03/31/06
--------------------	---------------	-----------------	----------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.